

## **Endeavor Data Summary**

### **Cruise 6/21/2010**

Review Date 6/22/2010

#### **Summary:**

The Endeavor completed 1 CTD cast at 1 station (EN08) on 6/21/2010. Water samples were collected for analysis of TPH and VOA. The Endeavor science operations were on hiatus while the science crew engaged in non-mission related work on the Ocean Intervention III. The Sentry AUV will be deployed on the evening of 6/21/2010 in the exclusion zone.

Dr. Van Mooy, a chemical oceanographer, has been measuring the activity of the enzyme lipase in water samples. Results indicate that lipase activity increases closer to the wellhead. Microbes could be using lipase to break the bonds in the surfactants found in dispersants. Therefore, these results suggest that lipase activity may be a useful indicator of dispersants in the water column. This finding needs to be validated by spiking water samples with a known concentration of dispersant, such as COREXIT 9500. Dr. Van Mooy would like to have COREXIT delivered to the ship in order to validate this method to detect dispersants and to appropriately interpret the data generated from the lipase activity.

The Endeavor reported evidence of plumes at 340 m and 1100 m based on Aquatracker aromatic hydrocarbon fluorometer and TETHYS mass spectrometer readings. However, this is not evident on the CTD plot that the Endeavor provided with their daily status report. Decreases in dissolved oxygen were present between depths of 800m and 1200 m.